Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method to write information to two virtual tape servers, comprising the steps of:

supplying a data storage and retrieval system comprising a host computer, a first virtual tape controller <u>comprising a VTC Copy Queue</u>, a second virtual tape controller, a first virtual tape server, and a second virtual tape server, wherein said first virtual tape controller comprises a first virtual host device and a first virtual copy device, and wherein said second virtual tape controller comprises a second virtual host device and a second virtual copy device, and wherein said first virtual tape server comprises a third virtual host device and a third virtual copy device, and wherein said second virtual tape server comprises a fourth virtual host device and a fourth virtual copy device, wherein said host computer communicates with said first virtual tape server ~~via said first virtual host device and said third virtual host device~~ <u>using a host / VTS bandwidth</u>, wherein said host computer communicates with said second virtual tape server via said second virtual host device and said fourth virtual host device, and wherein said first virtual tape server communicates with said second virtual tape server ~~via said first virtual copy device, said second virtual copy device, and said fourth virtual copy device~~ <u>using a VTS / VTS bandwidth</u>;

writing a host computer file to said second virtual host device disposed in said first virtual tape server;

queuing a copy job in said VTC Copy Queue, wherein said copy job comprises copying said host computer file to said second virtual tape server;

determining ~~the~~ an age of said queued copy job;

setting an age threshold;

determining if the age of said queued copy job is greater than said age threshold;

operative if the age of said queued copy job is greater than said age threshold, decreasing said host / VTS bandwidth thereby increasing said VTS / VTS bandwidth.

2. (currently amended) The method of claim 1, further comprising the step of operative if the age of said queued copy job is not greater than said age threshold, restoring said ~~first adjustable aggregate~~ host / VTS bandwidth to a pre-determined nominal value.

3. (currently amended) The method of claim 1, wherein said second virtual tape server comprises one or more ~~second~~ virtual host devices having a second adjustable aggregate bandwidth further comprising the step of operative if the age of said queued copy job is greater than said age threshold, decreasing said second adjustable aggregate bandwidth.

4. (original) The method of claim 3, further comprising the step of operative if the age of said queued copy job is not greater than said age threshold, restoring said second adjustable aggregate bandwidth to a pre-determined nominal value.

5.   Canceled.

6. (currently amended) The method of claim ~~5~~ 1, further comprising the steps of:

retrieving by said virtual copy controller said copy job from said copy queue;

writing said host computer file to a virtual copy device disposed in said second virtual tape server.

7. (currently amended) The method of claim ~~5~~ 6, further comprising the steps of:

setting a status signal time interval;

providing a status signal from said virtual tape controller to said first virtual tape server and to said second virtual tape server at said status signal time interval.

8. (currently amended) The method of claim ~~5~~ 1, further comprising the steps of:

queuing a plurality of copy jobs in said copy queue;

determining the age for each of said queued copy jobs;

providing a status signal comprising the age of the oldest queued copy job;

determining if the age of the oldest queued copy job exceeds said age threshold;

operative if the age of the oldest queued copy job is greater than said age threshold, decreasing said ~~first adjustable aggregate~~ host / VTS bandwidth and said second adjustable aggregate bandwidth;

operative if the age of the oldest queued copy job is not greater than said age threshold, restoring said ~~first adjustable aggregate~~ host / VTS bandwidth and said second adjustable aggregate bandwidth to a pre-determined nominal value.

9. (currently amended) A first virtual tape server comprising one or more virtual devices having an adjustable aggregate bandwidth, and a computer readable medium having computer readable program code disposed therein to write information to two virtual tape servers, wherein said article of manufacture is disposed in a data storage and retrieval system comprising a host computer, a first virtual tape controller comprising a VTC Copy Queue, a second virtual tape controller, said first virtual tape server, and a second virtual tape server, wherein said first virtual tape controller comprises a first virtual host device and a first virtual

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copy device, and wherein said second virtual tape controller comprises a second virtual host device and a second virtual copy device, and wherein said first virtual tape server comprises a third virtual host device and a third virtual copy device, and wherein said second virtual tape server comprises a fourth virtual host device and a fourth virtual copy device, wherein said host computer communicates with said first virtual tape server via said first virtual host device and said third virtual host device using a host / VTS bandwidth, wherein said host computer communicates with said second virtual tape server via said second virtual host device and said fourth virtual host device, and wherein said first virtual tape server communicates with said second virtual tape server via said first virtual copy device, said second virtual copy device, and said fourth virtual copy device, said second virtual tape server, using a VTS / VTS bandwidth, the computer readable program code comprising a series of computer readable program steps to effect:

receiving a host computer file via said second virtual host device;

receiving a signal from said first virtual tape controller, wherein said signal comprises the age of a copy job queued in said virtual tape controller, wherein said copy job comprises copying said host computer file to said second virtual tape server;

retrieving a pre-determined age threshold;

determining if said age of said queued copy job is greater than said age threshold;

operative if said age of said queued copy job is greater than said age threshold, decreasing said adjustable aggregate bandwidth host / VTS bandwidth thereby increasing said VTS / VTS bandwidth.

10. (currently amended) The first virtual tape server of claim 9, said computer readable program code further comprising a series of computer readable program steps to effect restoring said ~~first adjustable aggregate~~ host / VTS bandwidth to a pre-determined nominal value if said age of said queued copy job is not greater than said age threshold.

11. (previously presented) The first virtual tape server of claim 9, said computer readable program code further comprising a series of computer readable program steps to effect providing said host computer file to said second virtual tape server.

12. (previously presented) The first virtual tape server of claim 11, said computer readable program code further comprising a series of computer readable program steps to effect receiving a signal from said virtual tape controller that said host computer file was written to said second virtual tape server.

13. (previously presented) The first virtual tape server of claim 9, said computer readable program code further comprising a series of computer readable program steps to effect:

receiving a status signal from said first virtual tape controller, wherein said status signal comprises a timestamp and the age of the oldest queued copy job at said timestamp.

14. (currently amended) A computer program product written to a computer readable medium and usable with a programmable computer processor to write information to two virtual tape servers, disposed in a data storage and retrieval system comprising a host computer, a first virtual tape controller comprising a VTC Copy Queue, a second virtual tape controller, a first virtual tape server comprising an adjustable aggregate bandwidth, and a second virtual tape server, wherein said first virtual tape controller comprises a first virtual host device and a first

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virtual copy device, and wherein said second virtual tape controller comprises a second virtual host device and a second virtual copy device, and wherein said first virtual tape server comprises an adjustable aggregate bandwidth, a third virtual host device and a third virtual copy device, and wherein said second virtual tape server comprises a fourth virtual host device and a fourth virtual copy device, wherein said host computer communicates with said first virtual tape server via said first virtual host device and said third virtual host device using a host / VTS bandwidth, wherein said host computer communicates with said second virtual tape server via said second virtual host device and said fourth virtual host device, and wherein said first virtual tape server communicates with said second virtual tape server via said first virtual copy device, said second virtual copy device, and said fourth virtual copy device using a VTS / VTS bandwidth, comprising:

computer readable program code which causes said programmable computer processor to receive a host computer file via said second virtual host device;

computer readable program code which causes said programmable computer processor to receive a signal from said first virtual tape controller, wherein said signal comprises the age of a copy job queued in said virtual tape controller, wherein said copy job comprises copying said host computer file to said second virtual tape server;

computer readable program code which causes said programmable computer processor to retrieve a pre-determined age threshold;

computer readable program code which causes said programmable computer processor to determine if the age of said queued copy job is greater than said age threshold;

computer readable program code which, if the age of said queued copy job is greater

than said age threshold, causes said programmable computer processor to decrease said ~~adjustable aggregate bandwidth~~ host / VTS bandwidth thereby increasing said VTS / VTS bandwidth .

15. (currently amended) The computer program product of claim 14, further comprising computer readable program code which, if the age of said queued copy job is not greater than said age threshold, causes said programmable computer processor to restore said ~~adjustable aggregate~~ host / VTS bandwidth to a pre-determined nominal value.

16. (original) The computer program product of claim 14, further comprising computer readable program code which causes said programmable computer processor to provide said file to said second virtual tape server.

17. (previously presented) The computer program product of claim 16, further comprising computer readable program code which causes said programmable computer processor to receive a signal from said first virtual tape controller that said file was written to said second virtual tape server.

18. (previously presented) The computer program product of claim 14, further comprising:

computer readable program code which causes said programmable computer processor to receive a status signal from said first virtual tape controller, wherein said status signal comprises a timestamp and the age of the oldest queued copy job at said timestamp.

19. (previously presented) A data storage and retrieval system, comprising a host computer, a first virtual tape controller comprising a VTC Copy Queue, a second virtual tape controller, a first virtual tape server comprising a first adjustable aggregate bandwidth, and a

second virtual tape server, wherein said first virtual tape controller comprises a first virtual host device and a first virtual copy device, and wherein said second virtual tape controller comprises a second virtual host device and a second virtual copy device, and wherein said first virtual tape server comprises a third virtual host device and a third virtual copy device, and wherein said second virtual tape server comprises a fourth virtual host device and a fourth virtual copy device, wherein said host computer communicates with said first virtual tape server via said first virtual host device and said third virtual host device using a host / VTS bandwidth, wherein said host computer communicates with said second virtual tape server via said second virtual host device and said fourth virtual host device, and wherein said first virtual tape server communicates with said second virtual tape server via said first virtual copy device, said second virtual copy device, and said fourth virtual copy device, and wherein said first virtual tape server provides information to, and receives information from said second virtual tape server using a VTS / VTS bandwidth, using the following steps:

receiving a host computer file via said second virtual host device;

receiving a signal from said first virtual tape controller, wherein said signal comprises the age of a copy job queued in said virtual tape controller, wherein said copy job comprises copying said host computer file to said second virtual tape server;

retrieving a pre-determined age threshold;

determining if the age of said queued copy job is greater than said age threshold;

operative if the age of said queued copy job is greater than said age threshold, decreasing said ~~first adjustable aggregate bandwidth~~ host / VTS bandwidth thereby increasing said VTS / VTS bandwidth; ~~and~~

operative if the age of said queued copy job is not greater than said age threshold, restoring said first adjustable aggregate bandwidth to a pre-determined nominal value.

20. (currently amended) The data storage and retrieval system of claim 19, further comprising a virtual copy controller comprising a copy queue, wherein said virtual copy controller provides information to said second virtual tape server using the steps of:

queuing said copy job in said copy queue; and

providing said host computer file to said second virtual tape server.

21. (original) The data storage and retrieval system of claim 20, wherein said second virtual tape server comprises one or more second virtual host devices having a second adjustable aggregate bandwidth, wherein said second virtual tape server communicates with said one or more host computers using said one or more second virtual host devices, wherein said second virtual tape server receives information from said first virtual tape server using the steps of:

operative if the age of said queued copy job is greater than said age threshold, decreasing said second adjustable aggregate bandwidth; and

operative if the age of said queued copy job is not greater than said age threshold, restoring said second adjustable aggregate bandwidth to a pre-determined nominal value.